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 J. Wang et al.
 Deletions and insertions affect chromosome segregation in the worm *Caenorhabditis elegans*.

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A seedling carpet dominated by *Dipteryx oleifera* (almendro) in the forest understory of Barro Colorado Island, Panama. Seedlings here have a lower probability of surviving when surrounded by neighbors of their own species. However, rare species suffer more from the presence of like neighbors than do common species, suggesting a mechanism that shapes species abundances in diverse tropical forest communities. See page 330.

Photo: Christian Ziegler

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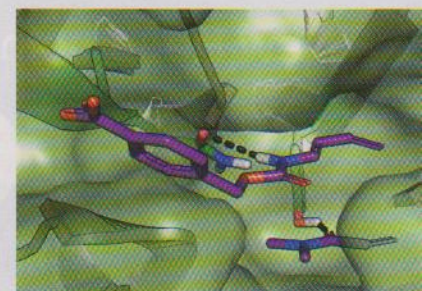
- 294 *Staphylococcus aureus* Nonribosomal Peptide Secondary Metabolites Regulate Virulence
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Dipeptides produced by a major bacterial pathogen are essential for successful infection.

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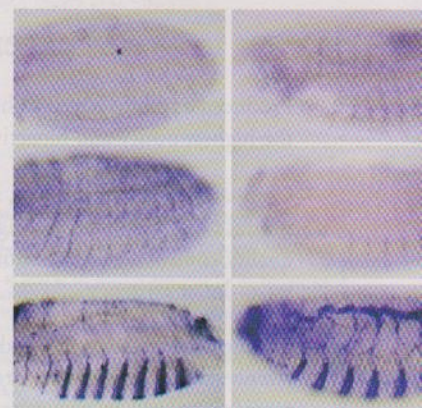
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N. Dray et al.
The processes that pattern body segmentation in annelids and arthropods both require the same signaling mechanism.
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SCIENCEEXPRESS

www.sciencexpress.org

MESSENGER Observations of Extreme Loading and Unloading of Mercury's Magnetic Tail

J. A. Slavin et al.

Relative to Earth, Mercury's magnetospheric substorms are more intense and occur on shorter time scales.

10.1126/science.1188067

Evidence for Young Volcanism on Mercury from the Third MESSENGER Flyby

L. M. Prockter et al.

Volcanism and associated deformation on Mercury may have lasted well into the last half of the history of the solar system.

10.1126/science.1188186

Mercury's Complex Exosphere: Results from MESSENGER's Third Flyby

R. J. Vervack Jr. et al.

Mercury's exosphere is more varied and more intertwined with its magnetospheric environment than previously thought.

10.1126/science.1188572

Association of Trypanolytic ApoL1 Variants with Kidney Disease in African-Americans

E. Genovese et al.

Genetic variants associated with kidney disease in African-Americans may confer protection against trypanosomes.

10.1126/science.1193032

>> News story p. 263; Science Podcast

Astrocytes Control Breathing Through pH-Dependent Release of ATP

A. V. Gourine et al.

Central nervous system glial cells are key players in the chemo-reflex essential for breathing.

10.1126/science.1190721

Induction of Broadly Neutralizing H1N1 Influenza Antibodies by Vaccination

C.-J. Wei et al.

An influenza virus vaccine elicits a broadly neutralizing, cross-protective antibody response in mice, ferrets, and nonhuman primates.

10.1126/science.1192517

Substrate Elasticity Regulates Skeletal Muscle Stem Cell Self-Renewal in Culture

P. M. Gilbert et al.

Muscle stem cells prefer a soft substrate.

10.1126/science.1191035

Signaling Kinase AMPK Activates Stress-Promoted Transcription via Histone H2B Phosphorylation

D. Bungard et al.

The energy sensor AMPK facilitates gene transcription by localizing to chromatin and phosphorylating histone H2B.

10.1126/science.1191241

TECHNICALCOMMENTS

Comment on "Observational and Model Evidence for Positive Low-Level Cloud Feedback"

A. J. Broccoli and S. A. Klein

Full text at www.sciencemag.org/cgi/content/full/329/5989/277-a

Response to Comment on "Observational and Model Evidence for Positive Low-Level Cloud Feedback"

A. C. Clement et al.

Full text at www.sciencemag.org/cgi/content/full/329/5989/277-b

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Highlights From Our Daily News Coverage

Amazon Hit by Its Own Katrina

Severe storm mowed down vast swaths of rainforest.

The Vaccine That Came In From the Cold

Genes from Arctic bacteria turn mammalian pathogens into vaccines.

Keeping Insulin Hanging Around

Long-lasting insulin shot shows promise in animals.

SCIENCE SIGNALING

www.sciencesignaling.org

The Signal Transduction Knowledge Environment

RESEARCH ARTICLE: Regulation of Notch1 Signaling by Nrf2—Implications for Tissue Regeneration

N. Wakabayashi et al.

The cell survival pathway mediated by the transcription factor Nrf2 facilitates tissue regeneration by promoting Notch1 signaling.

RESEARCH ARTICLE: Signaling to Transcription Networks in the Neuronal Retrograde Injury Response

I. Michaelevski et al.

Robustness in nerve injury responses results from control of axon-to-soma signaling networks by multiple regulatory components.

NETWATCH: MolecularMovies.org

Learn how to make 3D animations illustrating molecular and cellular events; in Educator Sites.

NETWATCH: Nuclear Receptor Resource (NRR)

Explore the nuclear hormone receptor superfamily through a collection of databases, interactive pathways, and graphics; in Protein Databases.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Veterinarian Scientists Bring Unique Perspectives to Translational Research

L. Chiu

D.V.M.-Ph.D.s are uniquely qualified to do research in animal models and translate findings across species, including humans.

Tooling Up: Integrate Yourself

D. Jensen

Being viewed as an outsider can happen to anyone, and it can have devastating career consequences.

SCIENCE TRANSLATIONAL MEDICINE

www.sciencetranslationalmedicine.org

Integrating Medicine and Science

EDITORIAL: Something in Common

S. H. Friend

The first Sage Commons Congress took steps toward open sharing of data to drive therapeutic development.

COMMENTARY: The Demographic and Biomedical Case for Late-Life Interventions in Aging

M. J. Rae et al.

A global research agenda on aging has the potential to avert enormous economic, social, and human costs.

RESEARCH ARTICLE: Natural Immunization Against Malaria—Causal Prophylaxis with Antibiotics

J. Friesen et al.

Malaria-infected mice treated with antibiotics remain healthy and are protected against subsequent malaria infection.

RESEARCH ARTICLE: Quinone Oxidoreductase-2—Mediated Prodrug Cancer Therapy

M. R. Middleton et al.

An oxidoreductase enzyme, abundant in tumors, can be catalytically activated to a cytotoxic DNA binding species in human subjects.

SCIENCEPODCAST

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Download the 16 July Science Podcast to hear about sharing social responsibility with companies, genetic variants associated with kidney disease, bringing science to Washington D.C. schools, and more.

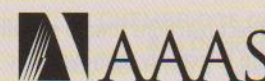
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Science Policy News and Analysis

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